

Abstract

The present invention provides a method for isotopically labeling a functional group possessed by an amino acid residue of a protein. The present invention also provides a protein whose functional group in an amino acid residue is isotopically labeled.

A functional group in an amino acid residue of a protein is substituted with an isotope-labeling group derived from an isotope-labeling compound by making use of the action of an enzyme. In particular, the carboxyamide nitrogen atom in a glutamine residue of a protein is replaced with an isotopically labeled atom by acting a transglutaminase on the glutamine residue.